Emission Anisotropy of \textit{p}-Cyano-N,N-Dialkylanilines in Poly(vinyl alcohol) Film

A. Kawski, P. Bojarski, and B. Kukliński

Institute of Experimental Physics, University of Gdańsk, ul. Wita Stwosza 57, PL-80-952 Gdańsk, Poland

Reprint requests to Prof. A. K., ul. Gen. W. Sikorskiego 11, PL 84-200, Wejherowo, Poland


The emission anisotropy spectra, \( r(\lambda) \) of \textit{p}-cyano-dimethylaniline (CDMA) and \textit{p}-cyano-diethyl-aniline (CDEA) in PVA films are temperature dependent. At 296 K a characteristic dependence of \( r(\lambda) \) on the absorption (A), short emission (SE) and long emission (LE) band, responsible for the total emission of fluorescence and phosphorescence is observed. On temperature enhancement to 355 K and next to 380 K the phosphorescence is eliminated. In the case studied the emission anisotropy is positive for the fluorescence bands SE and LE and it attains approximately 0.2, confirming thus that the transition moments’ directions are in these bands parallel.

\textit{Key words:} \textit{p}-Cyano-N,N-Dialkylanilines; Emission Anisotropy; Transition Moments.